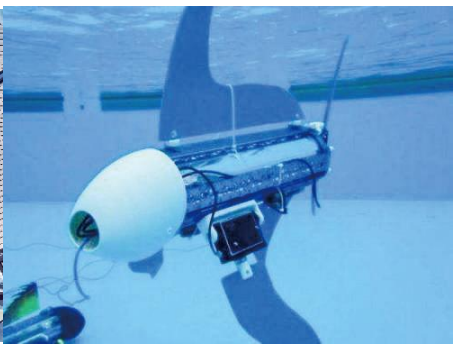
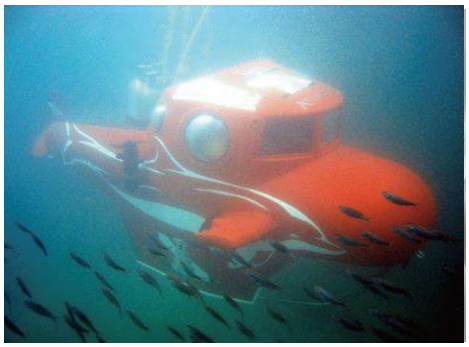
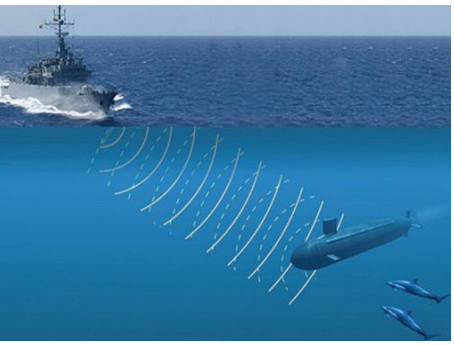
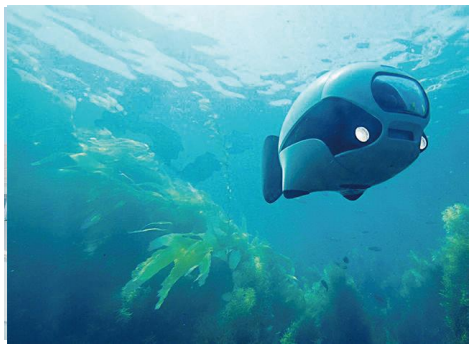
创新 / 合作 / 共赢

产品宣传手册

PRODUCT BROCHURE

INNOVATE
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西安凯兴物联科技股份有限公司

XI'AN KACISE OPTRONICS TECH CO., LTD

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KWD100 Handheld Depth Sounder

Introduction

Based on the principle of ultrasonic ranging, it can realize underwater ranging and underwater depth measurement. The characteristics of this product are that it can use the transducer attached to the machine for depth measurement; it can also be powered externally, communicate externally, and mount various ranging sensors of the company to perform corresponding ranging work. It can read the signal status of the transducer and sensor to facilitate relevant judgment.

Technical Specifications

Handheld depth sounder	
Range	0.7~100m
Weight measurement accuracy	±0.5% (maximum range)
Communication	USB-MODBUS protocol
Emission angle	3.6° ±10%
Power supply	18650 rechargeable lithium battery
Ambient temperature	-20℃<.C<60℃
Probe cable	3-core shielded cable
Probe connection	3-core aviation plug connection
Display	LCD display
Handheld host computer	
External power supply	DC12V-25.6v 100MA
Mounted sensor connection	4-pin aviation plug connection
Mounted sensor range	Depending on the sensor mileage
Display	LCD display

Application Fields

Detect large gaps in trees

Detect whether trees have hollows or cracks

Detect water depth

Measure water depth

KWD200 Ultrasonic Underwater Communications Sensor

Introduction

This product mainly uses ultrasonic waves to achieve underwater communication.
It is used for underwater unmanned submersible communication, underwater short command transmission, marine sensor network transmission, and marine environment monitoring network transmission.

Product Features

- Power supply: battery (12V±10%)
- Communication distance: 100m
- Pressure resistance: 100m water depth
- Working temperature: 0℃～60℃ (no freezing)
- Protection grade: IP68
- Case material: ABS

Technical Specifications

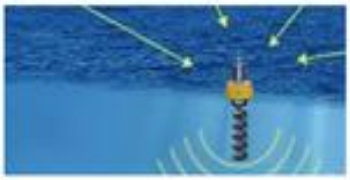
Communication distance	50 meters, 100 meters
Underwater acoustic communication rate	96bps
Response rate	3 seconds
Send information	1-12 characters
Bit error rate	≤8% (related to the test environment)
Communication method	RS485, MODBUS protocol
Voltage resistance	100 meters water depth
Usage environment	Water depth greater than 2 meters, away from motors and frequency conversion equipment
Power supply	Battery (12V ± 10%), receiving power 0.9W/transmitting power 5W
Protection level	IP68
Operating temperature	Working temperature: 0℃+60℃
Interface thread size	M33*1.5
Storage requirements	Storage environment temperature: -20~+60℃; Storage environment pressure: normal pressure; Storage environment humidity: ≤90%RH (non-condensing); Other requirements: No corrosive liquid, gas or steam in the environment, no vibration.
Wiring definition	Red: 12V+ Green: 12V- White: 485A Yellow: 485B
Usage precautions	During the test wiring process, the 485 line cannot touch and short-circuit the power line. If the short-circuit burns out, the product cannot be repaired.

Application Fields

Remote controlled underwater drone filming

Remote controlled underwater robot search

Remote control underwater robot grabbing objects



Underwater obstacle avoidance

KWD300 Ultrasonic Noise Detection Sensor

Introduction

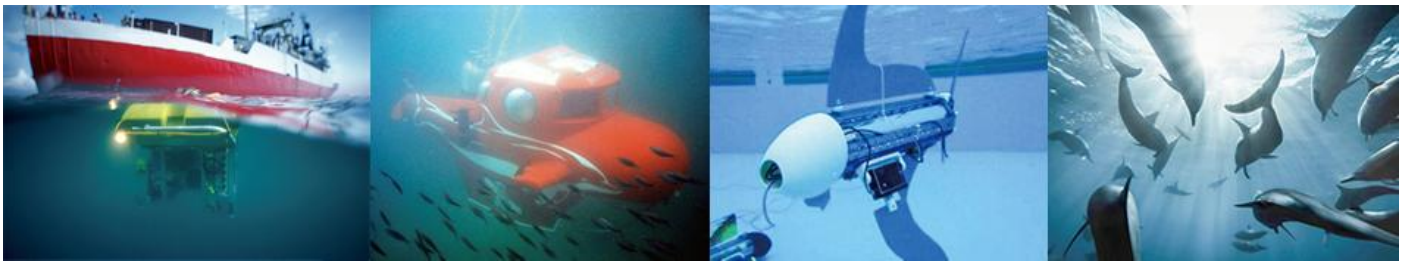
Mainly used for underwater environmental noise detection. Can be used for fish and shrimp eating sounds, dolphin sounds, underwater noise, ship noise monitoring, etc.

Divided into 3 frequency bands: 1~20KHz, 1~40KHz, 1~60KHz.

Technical Specifications

Power supply	9VDC~36VDC
Resolution	10mW
Ambient temperature	-5℃~60℃
Protection level	1P68
Probe cable	4-core shielded cable
Digital output	RS485
Analog output	Sine wave (sampled to signal amplified 10 times and amplified 100 times for output)

Application Fields



Ship noise monitoring | Underwater fish and shrimp feeding sound | Underwater noise monitoring | Dolphin sound monitoring

KWD400 360-Degree Scanning Sonar

Introduction

The 360-degree scanning sonar is completely sealed and can be immersed in water for a long time. The host computer software can display the surrounding environment map and test the distance value. The range can be selected according to the on-site environment.

Technical Specifications

Product name	360-degree scanning sonar
Range	0.25~10m
Accuracy	±0.5%FS
Operating voltage	24Vdc±10% (recommended power supply current 1.5A or above)
Power consumption	≤12W
Digital output	RS485 host computer imaging
Operating temperature	-20~60℃
Storage temperature	-40~80°℃
Operating pressure	1 standard atmospheric pressure
Installation method	bracket hoisting
Protection level	IP68
Quality	≤2000g
Casing material	stainless steel + rubber
Wire length	standard 5 meters (other line lengths need to be customized)

Application Fields

Detect large gaps in trees

Detect whether trees have hollows or cracks

Detect water depth

Measure water depth

KWD510 M26 Hydrophone

Introduction

Able to maintain high accuracy and high sensitivity in environments with large changes in temperature and pressure, this hydrophone provides two types of preamplifiers and is widely used in noise monitoring caused by liquid flow and fluctuations. Threaded connection for easy installation.

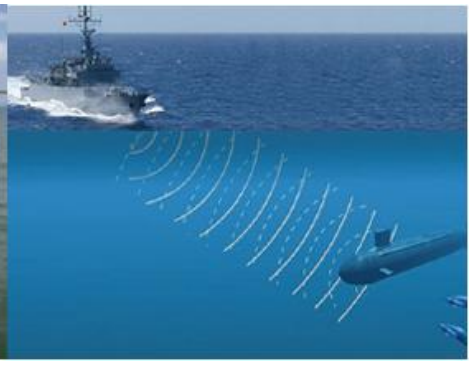
Technical Specifications

Product name	M26 Hydrophone
Power supply	6Vdc~13Vdc
Power consumption	≤150 mW
Output mode	Analog output (sampled to signal amplified 10 times and 100 times)
Ambient temperature	-45℃~85℃
Protection level	IP68
Sensor cable	4-core shielded cable
Cable length	2 meters

Application Fields

Noise generated by liquid flow in water pipes to determine leak points

Detect whether trees have hollows or cracks



Detect water depth

KWD520 M42＆M45 Hydrophone

Introduction

Able to maintain high accuracy and high sensitivity in environments with large changes in temperature and pressure, this hydrophone provides two types of preamplifiers and is widely used in noise monitoring caused by liquid flow and fluctuations. Threaded connection for easy installation.

Technical Specifications

Product name	M42＆M45 Hydrophone
Sensitivity	≥-166.5dB Vre: 1V/μPascal
Response frequency range	20Hz-20KHz
Power supply	6-13V DC
Power consumption	≤150 mW
Output signal	Analog output, (deep integration to signal amplification 10 times (20dB) and 100 times (40dB))
Material	Metal
Static pressure bearing	68Bar (1000psi)
Connection method	Clamp-type locking, clamp width ≤12mm
Protection level	IP68
Weight	≤600g, including 2m additional cable
Connecting cable	Low noise four-core shielded cable 2m
Overall length	80mm, 88mm

Application Fields

Noise generated by liquid flow in water pipes to determine leak points

Detect whether trees have hollows or cracks

Detect water depth

西安凯兴物联科技股份有限公司

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